410 Willoughby, Suite 303
Juneau, AK 99801-1795
PHONE: (907) 465-5100
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DIVISION OF AIR AND WATER QUALITY
AIR PERMITS

November 13, 2002

Mr. Fernando A. Guitart
Endicott Badami Delivery Manager
B.P. Exploration (Alaska) Inc.
900 East Benson Boulevard
P.O. Box 196612
Anchorage, AK 99519-6612

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
NO.: 7000 0520 0020 2019 1186

Subject: Construction permit applicability determination for Endicott Production Facility Doyon Rig 15 Boilers, DFH-E3-R1615-#1 & 2, like kind replacement and Administrative Revision. Amendment to Air Quality Control Permits No. 9773-AC011 and 9573-AA029.

Dear Mr. Guitart:

The Alaska Department of Environmental Conservation (the Department) finds that the proposed replacement of two Lister natural gas and distillate oil fired boilers rated at 4.3 MM Btu/hr. with two smaller boilers does not require a construction permit. The Department considers BP Exploration (Alaska) Inc.'s (BPXA) notification complete in accordance with 18 AAC 50.370, "Administrative Revisions." Therefore, the Department finds that BPXA is authorized to replace Doyon Rig 15 Boilers, DFH-E3-RIG 15-#1 & 2 accordance with AS 46.14.285 and 18 AAC 50.370.

BPXA has proposed replacing existing Lister boilers rated at 4.3 MM Btu/hr natural gas or distillate oil, Sources ID DFH-E3-RIG 15-#1 & 2 with Apache boilers rated at 4.2 MM Btu/hr natural gas or distillate oil. Using AP-42 emission factors and the rated capacity of the sources demonstrates that replacing the Lister boilers with the smaller Apache boilers will not increase emissions of any criteria air contaminant. Therefore, the project will not require a construction permit under 18 AAC 50.300(h)(2) and AS 46.14.130.

Please be advised that replacement of an existing source with an equivalent source at the Endicott Production Facility may avoid construction permitting under 18 AAC 50.300(h)(2) only if the replacement unit has equal or lower potential emissions of all criteria air contaminants. A construction permit would be required if the replacement unit has greater potential emissions of one or more criteria air contaminants.

As revised by Permit No.181CP03, Air Quality Control Permits No. 9773-AC011 and 9573-AA029 source description of Sources ID DFH-E3-RIG 15-#1 & 2 is revised as follows.

Doyon Rig 15 Boilers

Source ID	Make	Rated Capacity
DFH-E3-RIG 15-#1	Apache ~~Lister~~	4.2 ~~4.3~~ MM Btu/hr.
DFH-E3-RIG 15-#2	Apache ~~Lister~~	4.2 ~~4.3~~ MM Btu/hr.

The attached Permit No. 9773-AC011 Amendment 3 replaces Permit No. 9773-AC011 Amendment 2. The previous amendment omitted revisions to source identification and revisions from Permit No. 181CP01. Amendment No. 3 contains the requirements of AS 46.14 and 18 AAC 50 applicable to the boiler replacement project. Exhibits D and E have been revised to accommodate the change in source identification. In addition, Permit No. 9773-AC011 Amendment 3 fuel sulfur limits, fuel sulfur test methods, and operating restrictions have been updated consistent with Permit No. 181CP03, issued July 3, 2002 for increased fuel gas H_2S.

The provisions of 18 AAC 50.335(n)(3) require BPXA to revise the pending operating permit application for the Endicott Production Facility. BPXA will need to submit the information listed in 18 AAC 50.335 for new requirements as they relate to this permit action.

The terms and conditions of the revised permits remain effective until modified or revoked by the Department, regardless of any change in ownership of the facility or its sources. The responsibilities imposed by these permits may not be transferred without the written consent of the Department.

Please note that Alaska's air quality statutes, regulations, and permit application information can be obtained from the Department's web page at the following address: http://www.state.ak.us/local/akpages/ENV.CONSERV/dawq/aqm/mainair.htm.

Department regulations provide that if you disagree with this decision, you may request an adjudicatory hearing in accordance with 18 AAC 15.195-340. The request should be mailed to the Commissioner, Alaska Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, AK 99801-1795, by Certified Mail, Return Receipt Requested. If a hearing is requested, one copy of the request should be sent to the undersigned. Failure to submit a request within thirty days of service of this letter shall constitute a waiver of your right to an administrative review of this permit action by the Department.

In addition, any other person who has a private, substantive, legally-protected interest under state law that may be affected by the permit action may request an adjudicatory hearing within thirty days of service of the action. If a hearing is granted, it will be limited to the issues related to this permit action. You are reminded that, even if a request for an adjudicatory hearing has been granted, all permit terms and conditions remain in full force and effect.

Sincerely,

John F. Kuterbach, Manager
Air Permits Program

Enclosures: Permit No. 9773-AC011 Amendment No. 3

cc: Alison D Cooke, BPXA, Anchorage, AK
Cynthia Espinoza, ADEC/AWQ/APP, Anchorage, AK
Robert Cannone, ADEC/AWQ/APP, Fairbanks, AK
Laurie Kral, EPA Region 10, Seattle, WA

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY CONSTRUCTION PERMIT

Permit No. 9773-AC011, Amendment No. 3 Date: November 13, 2002
Rescinds Permit No. 9773-AC006

The Department of Environmental Conservation, under the authority of AS 44.19, 46.03, AS 46.14, 6 AAC 50, 18 AAC 15, and 18 AAC 50, issues this Air Quality Control Construction Permit to:

Owners: **(1) BP Exploration (Alaska), Inc.**
(2) Exxon Company USA
(3) Unocal Corporation

Operator: **B.P. Exploration (Alaska), Inc.**
P.O. Box 196612
Anchorage, AK 99519-6612

Facility: **Endicott Production Facility**

UTM Coordinates: Northing 7805.4 km, Easting 464.2 km, Zone 6
Township/Range: Section 36, T12N, R16E, Umiat Meridian

The owner proposes to concurrently install a new gas-fired combustion turbine and an additional flare purge gas source for enhanced oil recovery (EOR), and to upgrade two existing main gas compressors for miscible injection/gas re-injection (MGC).

The Department authorizes BPX to modify the facility in accordance with the terms and conditions of this permit, as described in the original permit application and subsequent submittals listed in Exhibit C. This permit also authorizes BPX to operate the proposed equipment as provided by AS 46.14.120.

_____
John Kuterbach, Manager
Air Permits Program

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PERMIT TERMS AND CONDITIONS

I. Permit Continuity

Except as revised or rescinded herein, or as superseded by an Air Quality Permit issued under AS 46.14.170, the Permittee shall comply with terms and conditions of Air Quality Control Permit to Operate No. 9573-AA029, as amended through January 17, 1997. This permit action incorporates terms and conditions from Air Quality Control Construction Permit No. 9773-AC006, issued November 28, 1997.

If permit terms and conditions listed in this permit conflict with those of Permit No. 9573-AA029, then the Permittee shall comply with terms and conditions listed herein.

II. Standard Permit Conditions

A. The Permittee shall comply with each permit term and condition; noncompliance constitutes a violation of AS 46.14, 18 AAC 50, and the Clean Air Act, and is grounds for:

1. An enforcement action;

2. Permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

3. Denial of an operating permit application.

B. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

C. Each permit term or condition is independent of the permit as a whole, and remains valid regardless of a challenge to any other part of the permit;

D. Compliance with the permit terms and conditions is considered to be compliance with those requirements that are:

1. Included and specifically identified in the permit; or

2. Determined in writing in the permit to be inapplicable.

E. The permit may be modified, reopened, revoked and reissued, or terminated for cause; a request by the permittee for modification, revocation and reissue, or termination of a notification of planned changes, or anticipated noncompliance does not stay any permit condition.

F. The permit does not convey any property rights of any sort, nor any exclusive privilege.

G. The Permittee shall allow an officer or employee of the Department, or an inspector authorized by the Department, upon presentation of credentials and at reasonable times, with the consent of the owner or operator, to:

1. enter upon the premises where a source subject to the construction permit is located or where records required by the permit are kept;

2. have access to and copy any records required by the permit;

3. inspect any facilities, equipment, practices, or operations regulated by or referenced in the permit; and

4. sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

H. The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit, or to determine compliance with the permit; upon request, the Permittee shall furnish to the Department copies of records required to be kept; the Department, in its discretion, will require the Permittee to furnish copies of those records directly to the federal administrator.

III. Standard Record Keeping, Reporting, and Testing Conditions

A. The Permittee shall certify all reports, compliance certifications, or other documents submitted to the Department under this permit as required by 18 AAC 50.205.

B. The Permittee shall submit test plans, reports, certifications, and notices required under Air Quality Control Permit No. 9573-AA029 and this construction permit to the Department's Air Quality Maintenance Section, Compliance Assurance Group, 410 Willoughby Avenue, Suite 105, Juneau, AK 99801-1795; telephone (907) 465-5022, facsimile (907) 465-5129.

C. The Permittee shall keep records of required monitoring data and support information for at least five years after the date of the collection; support information includes calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of reports required by this permit. The Permittee shall keep monitoring and compliance records as required by the Clean Air Act and applicable federal air quality regulations.

D. The Permittee shall conduct source testing as requested by the Department, required by this permit and 18 AAC 50.220. The Permittee shall comply with all applicable federal Air Quality requirements, and shall:

1. use the applicable test methods set out in 40 CFR Part 60, Appendix A, and 40 CFR Part 61, Appendix B, to ascertain compliance with applicable standards and permit requirements;

2. conduct source tests of unit exhausts and report the results as described. The Permittee may propose alternative test methods if it can be shown to be of equivalent accuracy, and will ensure compliance with the applicable standards or limits. Alternative test procedures must be approved by the Department prior to the test date.
   a. Nitrogen Oxides, NOx, expresses as NO_2 (ppm, lb/MMBtu, and lbs/hr): Reference Method 7E or Method 20 specified in 40 CFR, Part 60, Appendix A.
   b. Oxygen, O_2 (percent): Reference Method 3 or 3A as specified in 40 CFR, Part 60, Appendix A.
   c. Stack Velocity and Volumetric Flow Rate: Reference Methods 1-4 as specified in 40 CFR, Part 60, Appendix A.
   d. Particulate Matter (grains/dscf, lb/MMBtu, and lb/hr): Reference Method 5 as specified in 40 CFR, Part 60, Appendix A.
   e. Sulfur dioxide (SO_2) (ppm, lb/MMBtu, and lbs/hr): Reference Method 6 or 6C as specified in 40 CFR, Part 60, Appendix A.
   f. Visible Emission Surveillance (Percent): Reference Method 9 as specified in 40 CFR, Part 60, Appendix A.

3. Except for Visible Emission Surveillance (Condition III.D.2.f), submit to the Department, within 60 days after receiving a request, and at least 30 days before the scheduled date of the tests, a complete plan for conducting the source tests;

4 Except for Visible Emission Surveillance (Condition III.D.2.f), give the Department written notice of the test dates 10 days before each series; and

5. Within 45 days after completion of the set of tests, submit the results, to the extent practical, in the format set out in *Source Test Report Outline* in Volume III, Section IV.3, of the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030(8).

E. The Permittee shall: install; calibrate; conduct applicable continuous monitoring system performance tests listed in 40 CFR 60, Appendix B, and certify test results; operate; and maintain air contaminant emissions and process monitoring equipment on the sources as described herein and in documents provided by the Permittee, listed in Exhibit C. The applicant shall submit monitoring equipment siting, operation, and maintenance plans and procedures for approval by the Department.

For continuous emission monitoring systems, the Permittee shall comply with each applicable monitoring system requirement, as listed in 40 CFR 60.13, 60.19, the applicable subpart as incorporated by reference in Condition VI, 40 CFR 60, Appendix F, and the *EPA Quality Assurance Handbook For Air Pollution Measurements*, EPA/600 R-94/038b. The Permittee shall attach to the Facility Operating Report required by Condition III(G), a copy of each continuous emission monitoring system data assessment report for Quality Assurance Procedures conducted in accordance with 40 CFR 60, Appendix F.

F. The Permittee may seek Department approval of alternate monitoring, record keeping, and reporting requirements than those listed in this permit by submitting a written request to the Department. Until such time as the Department approves an alternative monitoring, record keeping, or reporting requirement, the Permittee shall comply with the requirements listed in this permit.

G. Permittee shall submit to the Department **two** copies of a quarterly Facility Operating Report, as set out in Condition G(26), of Air Quality Control Permit No. 9573-AA029, and in Exhibit A of this permit by January 30th, April 30th, July 30th, and October 30th each year for operations during the preceding calendar quarter.

H. Excess Emission Facsimile Report. Within 24 hours of discovery, the Permittee shall report emissions that exceed permit conditions of State and federal emission standards by faxing a completed and signed "Excess Emission Notification Form," found in Exhibit F, to the Department at (907) 465-5129.

I. Air Pollution Emergency Report. In addition to the requirements of Permit Condition H, upon discovery of any emission in quantity or duration that is potentially injurious to human health, the permittee shall immediately contact the Department's Division of Spill Prevention and

Response (SPAR) by telephone at (907) 451-2121 during normal working hours, and after normal working hours call 800-478-9300, and fully explain the nature of the emergency.

J. The Permittee shall clearly display the cover page of this permit, and keep a copy of this permit, the State Air Quality Control Regulations 18 AAC 50, and Alaska Statutes 46.14, at the permitted facility.

K. The Permittee shall report in accordance with Condition III(H) all process operations in excess of applicable limits specified in the permit.

L. The Permittee shall operate each source in compliance with the applicable emission standards specified by 18 AAC 50.040-.070, by an applicable federal New Source Performance Standard (NSPS) or National Emission Standard for Hazardous Air Pollutants (NESHAP), by limits established as the result of a BACT or LAER determination, or the owner-requested emission limits, standards, fuel specifications, and operating limits.

IV. Notification and Operating Conditions

A. The Permittee is authorized to install and operate the following new emission source at the Endicott Production Facility:

Tag #	Description	Rated Capacity
GTRB-E3-9210	Nuovo-Pignone (NP) PGT-5 Turbine	7,300 hp @ ISO Condition

The Permittee is authorized to modify and operate the following existing emission sources at the Endicott Production Facility:

Tag #	Description	Rated Capacity
NGT-E3-1510A	Nuovo-Pignone (NP) Frame 5D	43,000 hp @ ISO Condition
NGT-E3-1510B	Nuovo-Pignone (NP) Frame 5D	43,000 hp @ ISO Condition
H-EO-1602(HP)	GKN Birwelco LTD	500 MMscf/day, new purge point of 1500 scf/hr

B. The Permittee may replace the existing burner in the BS&B Heater, source No. NGH-V-E3-1401-4, with a replacement natural-gas burner that has a rated capacity not to exceed 7.0 MMBtu/hr heat input. This burner replacement constitutes a modification as classified under 18 AAC 50.300(h)(2), and is subject to State Emission Standards and Best Available Control Technology (BACT) emission limits established for the BS&B Heater.

1. Monitoring and Recording: Permittee shall conduct a carbon monoxide and oxides of nitrogen emission source test upon Department request to ascertain compliance with BACT emission limits.

2. Reporting: Permittee shall submit results of the emission source test as set out in Condition III(D).

3. The Permittee shall develop and implement standard operating and maintenance procedures for each source listed in Condition IV(A) and IV(B) of this permit. Permittee shall keep a copy of the procedures available at a location within the facility that is readily accessible to operators of the equipment and to authorized representatives of the Department.

4. The Permittee shall install, maintain, and operate, in accordance with standard operating procedures, fuel-burning equipment, process equipment, emission control devices, and testing equipment and monitoring equipment to provide an optimum control of air contaminant emissions during all operating periods.

C. The Permittee shall document the date construction commences, stops, and when construction is completed for each new emission source listed in Condition IV(A). If the Permittee is subject to the permit re-opening provisions of 18 AAC 50.320(c)(1) or (2), the Permittee shall notify the Department and submit a new Best Available Control Technology assessment for review before commencing or continuing construction.

D. For each source listed in Condition IV(A), the Permittee shall monitor and record the hours of operation. The Permittee shall report the hours each source operates each month in the Facility Operating Report required by Condition III(G).

V. 18 AAC 50.010: Ambient Air Quality Standards and Increments

A. The Permittee shall not interfere with the attainment or maintenance of the Ambient Air Quality Standards listed in 18 AAC 50.010, and shall not cause or contribute to a violation of the maximum allowable ambient concentrations (the PSD increments) listed in 18 AAC 50.020 as follows:

1. Except as provided for in Condition V(A)(2), construct and operate the facility in accordance with the application and subsequent submittals listed in Exhibit C of this permit.

2. Notify the Department prior to making any change at the facility that deviates from the permit application and subsequent submittals listed in Exhibit C, such as changes in equipment size, configuration, or location.

    a. The Permittee shall ask the Department if additional ambient impact assessment modeling is warranted for the proposed change.

    b. Within 60 days upon receiving written Department notice that modeling is warranted, the Permittee shall prepare and submit to the Department an ambient impact assessment for the specified air contaminant and averaging period.

    c. The Permittee shall not make the change until the Department concurs the change will not interfere with attainment or maintenance of ambient standards and increments.

B. Limits on fuel type and quality. The Permittee shall operate emission sources using only natural gas fuel with a hydrogen sulfide (H_2S) content not exceed 250 ppm or fuel oil with a fuel sulfur content no greater than 0.15 percent sulfur (by weight).

1. Monitoring and recording: The Permittee shall conduct periodic fuel sulfur and hydrogen sulfide tests or obtain vendor certification of fuel sulfur content in accordance with Condition VI(B)(4) and VII(C)(3);

2. Reporting: The Permittee shall report fuel sulfur test results or copies of vendor certification of fuel sulfur content in accordance with Condition VII(D)(3);

C. **Shutdown Provisions**: During major plant maintenance shutdowns, the Permittee shall operate only the listed emission sources with listed fuel for no greater than 504 hours per 12-month rolling average:

1. Scenario 1
    a. NATCO Kongsberg Turbine Unit NGT-#1-Rig 15, gas and fuel oil;
    b. NATCO Kongsberg Turbine Unit NGT-#2-Rig 15, gas and fuel oil;
    c. NATCO Kongsberg Turbine Unit NGT-#3-Rig 15, gas and fuel oil;
    d. Caterpillar D399 Unit A-Rig 15, fuel oil;
    e. ENTECH Heater Unit NGH-E3-303, gas and fuel oil;
    f. Fairbanks Morse diesel generator, Unit DO-GED-E3-4505, fuel oil;
    g. Fairbanks Morse diesel generator, Unit DO-GED-E3-4506, fuel oil;

h. Portable Portatest flare source or Haliburton portable flare source, limited to 200 hours of operation for selective process purge;
i. Portable emergency generator DO-GEC-0036, fuel oil; and
j. Portable air compressor DO-KED-0041, fuel oil; **OR**

2. Scenario 2
   a. NATCO Kongsberg Turbine Unit NGT-#1-Rig 15, gas and fuel oil;
   b. NATCO Kongsberg Turbine Unit NGT-#2-Rig 15, gas and fuel oil;
   c. NATCO Kongsberg Turbine Unit NGT-#3-Rig 15, gas and fuel oil;
   d. Caterpillar D399 Unit A-Rig 15, fuel oil;
   e. Caterpillar D379 Unit B-Rig 15, fuel oil;
   f. Caterpillar D379 Unit C-Rig 15, fuel oil;
   g. Apache boiler, Unit DFH-E3-RIG 15-#1, gas and fuel oil;
   h. Apache boiler, Unit DFH-E3-RIG 15-#2, gas and fuel oil;
   i. Ruston gas-fired turbine sources NGT-E3-4501 through NGT-E3-4504; concurrent operation of no greater than two units during shut-down;
   j. Claudius Peters heater source NGH-E3-3002;
   k. ENTEC heater source NGH-E3-3031;
   l. WR Steel heater source NGH-E3-3201;
   m. Portable Emergency Generator source DO-GEC-0036;
   n. Portable Air Compressor DO-KED-0041;
   o. Portable Portatest flare or Portable Haliburton flare, limited to 135 hours and 440 hours of operation, respectively;
   p. Process flare source unit H-EO-1601 (LP); and
   q. Process flare source unit H-EO-1602 (HP).

D. **Recording and Reporting - Shutdown Periods**: The Permittee shall record and report the following information in the Facility Operating Report set out in Condition III(G):

1. the beginning and ending dates of the scheduled shutdown;
2. the shutdown operating scenario;
3. a list of each emission unit operated during shutdown, the number of unit hours operated during shutdown;
4. the type of fuel burned in each piece of equipment using appropriate units (e.g. MMscf/hr, gallons per day, etc.); and
5. any unplanned changes in scheduled shutdown maintenance operations that deviate from the fuel listed in Condition V(B) or the equipment listed in Condition V(C).

VI. 18 AAC 50.040: Federal Standards Adopted by Reference

The Permittee shall comply with the requirements of 40 CFR 60, New Source Performance Standards (NSPS), and 40 CFR 61, National Emission Standards for Hazardous Air Pollutants (NESHAP), as they apply to the equipment specified below.

The Permittee shall submit a copy of all NSPS and NESHAPS reporting to the U.S. EPA Region 10 and the Department, as required by the applicable Federal standards. The Permittee may attach periodic federal reporting to the Facility Operating Report required by Condition III(G).

The Permittee shall notify the Department of any U.S. Environmental Protection Agency (EPA) granted waivers of NSPS or NESHAP emission standards, record keeping, monitoring, performance testing, or reporting requirements within 30 days after the Permittee receives a waiver.

A. 40 CFR 60, Subpart A. In accordance with 40 CFR 60, Subpart A, 40 CFR 61, Subpart A, and 18 AAC 50.040, for each construction, modification, or reconstruction of affected facilities and sources regulated under 40 CFR 60 and 61, the Permittee shall notify the Department and EPA of anticipated beginning construction date, initial equipment start-up date, actual equipment start-up date, and performance test date, and submit all information required under 40 CFR 60.6-60.8, 60.11-13, 60.14-19, 40 CFR 61.07, and 61.09-61.14.

B. 40 CFR 60, Subpart GG; Gas turbine unit NGT-E3-1510A, NGT-E3-1510B, GTRB-E3-9210, NGT-E3-1405, NGT-E3-1802, NGT-E3-1907, NGT-E3-4501, NGT-E3-4502, NGT-E3-4503, NGT-E3-4504, NGT-#1-Rig 15, NGT-#2-Rig 15, and NGT-#3-Rig 15:

1. Applicability and designation of affected facilities, 40 CFR 60.330. Affected units are all stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour based on lower heating value as described in 40 CFR 60.330(a) and (b).

2. Standard for nitrogen oxides, 40 CFR 60.332(a)(2): $STD = 0.0150(14.4)/Y + F$; where STD is the allowable NOx emissions (percent by volume) at 15% O_2, Y is the manufacturer's rated heat rate, and F is the emission allowance for fuel-bound nitrogen. All gas turbine units at the Endicott facility are subject to this standard.

3. Standard for sulfur dioxide, 40 CFR 60.333. The Permittee shall comply with the sulfur dioxide new source performance limitation listed in 40 CFR 60.333(a) or (b) of 150 ppm exhaust concentration, or 0.8% fuel sulfur content by weight, respectively. All gas turbine units at the Endicott facility are subject to this standard. The permittee shall

comply with these requirements by burning primarily natural gas with a hydrogen sulfide content no greater than 250 ppm, or an alternate fuel with sulfur content no greater than 0.15%.

4. Monitoring of operations, 40 CFR 60.334. The permittee shall comply with 40 CFR 60.334(b) to monitor the sulfur content of the fuel gas. The permittee shall record fuel gas sulfur content or develop a custom schedule to test fuel as specified in 40 CFR 60.334(b)(2). The permittee shall include with reports submitted under 40 CFR 60.7(c), information as listed in 40 CFR 60.334(c), (c)(2) and (c)(4).

5. Test methods and procedures, 40 CFR 60.335.

   a. The permittee shall conduct performance tests in accordance with Condition III(D), as required in 40 CFR 60.335(b), or alternative test methods in accordance with 40 CFR 60.335(f).
   b. The permittee may propose an alternative to the reference methods in accordance with 40 CFR 60.335(f)(1).

VII. 18 AAC 50.055: Industrial Processes and Fuel-Burning Equipment--All Fuel Burning Equipment

A. The Permittee shall comply with 18 AAC 50.055(a)(1) and 18 AAC 50.055(b)(1), which state that visible emissions, excluding condensed water vapor, from an industrial process or fuel-burning equipment may not reduce visibility through the exhaust effluent by greater than 20 percent, for a total of more than three minutes in any one hour, and particulate matter emitted from an industrial process or fuel-burning equipment may not exceed, per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours, 0.05 grains.

B. The Permittee shall comply with 18 AAC 50.055 (c), which states that sulfur compound emissions, expressed as sulfur dioxide, may not exceed 500 ppm averaged over a period of three hours; by using only natural gas fuel with a hydrogen sulfide content not to exceed 250 ppmv, and alternate fuel or diesel fuel with a sulfur content not to exceed 0.15 percent by weight. These fuel requirements, incorporated by reference, are set out in Permit No. 9573-AA029, Condition B(5) and Exhibit B.

C. Monitoring and recording: The Permittee shall:

1. Conduct a visible emission surveillance for sources NGT-E3-1510A, NGT-E3-1510B, and GTRB-E3-9210 no less than once each calendar year in accordance with Condition III(D)(2)(f);

2. Upon Department request, conduct a source emission test or visible emission surveillance in accordance with Condition III(D) for any fuel-burning equipment or industrial process source listed in Exhibit D; and

3. Measure the hydrogen sulfide content of natural gas fuel in accordance with Permit Condition VI(B)(4). Fuel Gas H_2S content may be measured using length-of-stain-tube test methods: ASTM Methods D 4810-88, D 4913-00, or GPA Method 2377-86, or by using the Draeger Chip Measurement System (CMS).Measure the fuel sulfur content of alternate fuel or diesel fuel in accordance with sulfur measurement methods incorporated by reference under ASTM D 396 no less than once a month or attach a vendor certification documenting the fuel sulfur content of each delivery to the Endicott Production Facility.

4. Provide natural gas fuel consumption records for each source. The fuel use may be estimated by measurement techniques and calculations approved by the Department. Liquid fuel flow meters and totalizers, if used, must be calibrated and certified to be accurate to ±5%; submit a copy of the manufacturer's certification of accuracy for each flow meter or totalizer within 90 days after meter installation.

D. Reporting--The Permittee shall:

1. Submit to the Department visible emission surveillance records within ten days after conducting the surveillance;

2. Submit source emission test reports in accordance with Condition III(D)(5);

3. List in the Quarterly Facility Operating Report under Condition III(G):

   a. The fuel sulfur content measured in accordance with Condition VII(C)(3), applicable federal NSPS requirements incorporated by reference in Condition VI, and Condition 21 and Exhibit D of Permit No. 9573-AA029.

   b. For each source, the fuel use each month.

c. The analytical results for alternate fuel and diesel fuel sulfur content or vendor certification for dual-fuel turbine and diesel-fired units, as required by Condition VII(C)(3).

d. Report to the Department in accordance Permit Condition III.I when fuel with a maximum sulfur content of 0.15% by weight is not available. In the report, list the reason for the fuel oil unavailability.

4. Submit a copy of the fuel meter(s) certification, if applicable.

VIII. 18 AAC 50.110: Air Pollution Prohibited

All Emission Sources

The Permittee shall comply with 18 AAC 50.110, which states that no person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or would unreasonably interfere with the enjoyment of life or property.

To comply with this requirement, the Permittee shall:

A. Keep a log of all public complaints received regarding air emissions and the Endicott Production Facility, including the date, time, and nature of complaint. Attach a copy of the complaint log to the facility operating report required by Condition III(G);

B. Take reasonable actions to address air pollution complaints resulting from emissions at the facility; and

C. Notify the Department no less than 30 days in advance of any planned modification or replacement of the fuel burning equipment, which might result in increased potential air contaminant emissions. The notification must be in writing and must include a description of the proposed change and an estimate of any change in the quantity of emissions of each regulated air contaminant that may occur as the result of the modification or replacement.

IX. Revised Permit Terms, 18 AAC 50.310(k)

A. Permit Condition 16 of Permit No. 9573-AA029 is rescinded and replaced with:

1. Permittee shall:

a. operate the Haliburton Portable Flare no greater than 200 hours of operation a year;
b. operate the Portatest Flare with an annual gas flare rate not to exceed 163.8 MMscf/year, and hours of operation no greater than 504 hours a year;
c. operate the Haliburton and Portatest Flares with a cumulative gas flare rate not to exceed 208.3 MMscf/ year; and
d. not operate the Haliburton and Portatest Flares concurrently.

2. Monitoring and Record Keeping
   a. The Permittee shall monitor the natural gas consumption of the Haliburton and Portatest flare; and
   b. the time, date, and duration for which each flare is in operation.

3. Reporting--The Permittee shall report in accordance with Condition III(K) when:
   a. The Haliburton Flare operation exceeds 200 hour per year.
   b. Portatest Flare
      (1) natural gas consumption exceeds 163.8 MMscf/yr;
      (2) operation exceeds 504 hours per year;
   c. Portable Flare
      (1) cumulative natural gas consumption exceeds 208.3 MMscf/yr; or
      (2) Portatest and Haliburton flares are operated concurrently.

B. Natco Heater NOx Best Available Control Technology (BACT) limit (effective November 28, 1997). The Department revises the NOx BACT limit for the C.E. Natco NGL Reboiler, Unit NGH-E3-1404, from 0.08 lb/MMBtu to 0.15 lb/MMBtu.

1. Monitoring and Recording: Permittee shall conduct an oxides of nitrogen emission source test on Unit NGH-E3-1404, in accordance with Permit Condition III(D) within 90 days after the permit is issued and upon Department request to ascertain compliance with BACT emission limits. Permittee shall conduct the initial source test at no less than ninety percent rated capacity.

2. Reporting: Permittee shall submit results of the emission source test as set out in Condition III(D)(5).

C. The Permittee shall operate the Claudius Peters Heater, NGH-E3-3302, no greater than 194 days in any twelve-month period.

1. Monitoring and Recording: The Permittee shall log the total hours the Claudius Peters Heater NGH-E3-3302 operates each month.

2. The Permittee shall report to the Department when the operation of this unit exceeds 194 days in a twelve-month period.

X. 18 AAC 50.315(e)(3)(A): Best Available Control Technology (BACT)

The Permittee shall modify, install, and operate emission or operational controls as BACT for the following equipment:

A. Limits

1. Oxides of Nitrogen (NOx) control technology for MGC and EOR natural gas-fired turbine units, and the additional flare purge point:

a. The Permittee shall:
(1) Modify source NGT-E3-1510A and NGT-E3-1510B using compressor upgrades capable of achieving continuous compliance with the limit specified in Condition X(A)(1)(b)(1).
(2) Install and operate source GTRB-E3-9210 using accepted Operation and Maintenance (O/M) practices that have demonstrated or have the potential of complying continuously with the limit specified in Condition X(A)(1)(b)(2).
(3) Install and operate the additional flare purge point using accepted O/M practices that have demonstrated or have the potential of complying continuously with the limit specified in Exhibit E of this permit.

b. The Permittee shall comply with the following NOx emission limits:
(1) Emissions from source NGT-E3-1510A and NGT-E3-1510B are not to exceed 150 ppmvd at 15% oxygen.
(2) Emissions from source GTRB-E3-9210 is not to exceed 125 ppmvd at 15% oxygen.

B. Sulfur Dioxide (SO_2) control technology: The permittee shall operate sources NGT-E3-1510A, NGT-E3-1510B, and GTRB-E3-9210 with natural gas fuel only. The Permittee shall use natural gas fuel with a hydrogen sulfide content not to exceed 250 ppm.

C. Particulate Matter (PM) control technology.

1. The permittee shall operate sources NGT-E3-1510A, NGT-E3-1510B, and GTRB-E3-9210 comply with 10% visible emissions as a surrogate for particulate matter BACT.
2. The permittee shall operate the flare modification to achieve visible emissions no greater than 20% as a surrogate for particulate matter BACT.

D. Monitoring and Record Keeping

1. NOx--Permittee shall monitor and record compliance as follows:

a) Permittee shall obtain from the manufacturer and submit to the Department NOx emission curves that reflect expected NOx emissions over the expected range of loads and operating temperatures;

b) Permittee shall conduct two NOx emission source tests for either NGT-E3-1510A or NGT-1510B, and GTRB-E3-9210, within one year of the commission date, in accordance with permit condition III(D). Permittee shall conduct one test between June and August, and the second test in January or February;

c) if source tests results of X(D)(1)(b) are below 80% of the NOx limit specified in Condition X(A)(1)(b), Permittee shall conduct an emission source test no less than once every five years;

d) except as provided for in Condition X(D)(1)(c), if source test results are both below 90%, Permittee shall conduct an emission source test no less than once every two years;

e) except as provided for in Condition X(D)(1)(c) or X(D)(1)(d),

Permittee shall within 90 days after conclusion of tests set out in X(D)(1)(b), install, calibrate, certify, operate, and maintain in accordance with Condition III(E), a continuous oxides of nitrogen emission monitoring system (CEMS) on the exhaust stack of Source NGT-E3-1510A or NGT-1510B, and GTRB-E3-9210. Permittee shall continuously monitor and record compliance with Condition X(A)(1)(b) based upon 1-hour average oxides of nitrogen measurements.

2. SO_2--Refer to sulfur dioxide monitoring and record keeping, Conditions VI(B)4 and VII(C)(3).

3. Particulate Matter (PM)--Refer to visible emission monitoring, recording, and reporting requirements, Condition VII(C)(1) and VII(C)(2).

E. Reporting

1. NOx

a. The Permittee shall submit for Source NGT-E3-1510A, NGT-E3-1510B, and GTRB-E3-9210, the natural gas-fired turbine vendor's performance curves and factory source test results.

b. The Permittee shall conduct performance tests for either Source NGT-E3-1510A or NGT-E3-1510B, and GTRB-E3-9210, as required by Condition VI(B)(5).

c If subject to X(D)(1)(e), the Permittee shall attach a copy of the CEMS quarterly cylinder gas audit and annual relative accuracy audit data reports to the facility operating report required under Condition III(G).

d. If subject to X(D)(1)(e), the Permittee shall attach to the facility operating report a table of daily average oxides of nitrogen emission from Source NGT-E3-1510A, NGT-E3-1510B, and GTRB-E3-9210.

e. If subject to X(D)(1)(e), the Permittee shall attach a copy of quality assurance (QA) data, statistical summaries, and audit reports/recommendations for applicable Federal Quality Assurance Procedures cited in Condition III(E).

2. SO_2--Report as provided for under Condition VII(D)(3).

3. Particulate Matter (PM)--Report as provided for under Condition VII(D)(1) and VII(D)(2).

EXHIBIT A
FACILITY OPERATING REPORT ATTACHMENTS

Unless transmitted under a separate cover to the Department, the Permittee shall attach or include reports as listed below in accordance with Condition III(B) and the Conditions cited below:

1. Condition III(E) and X(D)(1)--If applicable, continuous Emission Monitoring System Data assessment reports.

2. Condition IV(D)--List of Operational Hours for emission sources.

3. Condition VI--EPA periodic reporting for New Source Performance Standards.

4. Condition VII(D)(3)--Fuel sulfur content reporting.

5. Condition VIII(A)--Public complaints.

6. Condition X(E)(1)(d)--If applicable, daily average NOx turbine emissions.

7. Certify the Facility Operating Report in accordance with Condition III(A) and submit to the Department in accordance with Condition III(B).

EXHIBIT B
SUBMITTAL LIST

1. Certify and submit all notifications in accordance with Conditions III(A) and III(B).

2. Submit reports and notices required under Conditions III(D)(2) - (5) for source tests.

3. Submit monitoring notices and requests set out under Condition III(E) and III(F).

4. Submit excess emission reports as set out in Condition III(H) and Exhibit D.

5. Submit BACT analyses if subject to Condition IV(C) and 18 AAC 50.320(c).

6. Submit facility changes as set out in Condition V(A)(2).

7. Submit NSPS/NESHAPS reports and certifications as set out in Conditions III(L) and VI.

8. Submit the fuel meter certifications as set out in Conditions VII(C)(4) and VII(D)(4).

9. Submit visible emission surveillance records as set out in Condition VII(D)(1).

10. Submit modification notices as set out in Condition VIII(C).

11. Submit vendor performance curves and factory source test certification in accordance with Condition X(E)(1)(a).

EXHIBIT C
PERMIT APPLICATION DOCUMENTATION

June 24, 1998	Final Technical Analysis Report (TAR) and Permit for BPX Endicott Production Facility Enhanced Oil Recovery (EOR) and Main Gas Compressor (MGC) Projects.
April 7, 1998	Preliminary Technical Analysis Report (TAR) drafted by F. Okamoto, A. Schuler, and J. Baumgartner.
January 28, 1998	E-mail notification from A. Schuler (ADEC), to A. Cook (BPX) and B. Steiner (WCI), regarding PM-10 emission rate estimation and comparison methodology used in the Endicott EOR/MGC PSD application.
January 14, 1998	Letter and attachments from J. Platt (BPX), to A. Schuler (ADEC). Letter confirming issues, discussion and resolution of unresolved teleconference items held on January 13, 1998, between BPX and ADEC.
December 22, 1997	Letter from C. Schmitt (WCC), to J. Baumgartner (ADEC). Response submittal clarifying BPX's modeling demonstration of compliance with Ambient Air Quality Standards and Increments during scheduled shutdown scenarios.
November 28, 1997	Air Quality Construction Permit No. 9773-AC006 for Endicott Production Facility, BS&B Heater Upgrade Project, amendment to Air Quality Control Permit to Operate No. 9573-AA029.
September 5, 1997	Letter with Attachments from J. Platt (BPX) to J. Stone (ADEC), requesting operational flexibility Air Quality Control Permit to Operate No. 9573-AA029, for diesel fuel-fired engines associated with Doyon Rig 15.
July 25, 1997	Letter from D. Wallace (BPX), to J. Baumgartner (ADEC). Response submittal for Revised BACT Analysis for Endicott EOR and MGC Upgrade Projects, updating the BACT analysis in the original PSD application submitted by BPX in September 1995.
July 18, 1997	Letter from J. Baumgartner (ADEC) to S. Taylor (BPX). Letter acknowledging application completeness for BS&B Heater upgrade and modification request for Endicott Production Facility, Air Quality Control Permit to Operate No. 9573-AA029.

EXHIBIT C (cont.)
PERMIT APPLICATION DOCUMENTATION

June 5, 1997	Fax with e-mail attachment from A. Cooke (BPX), to B. Williams (ADEC). Fax transmittal explaining permit amendment chronology and corrections for portable flares at the Endicott Production Facility.
May 27, 1997	Letter from J. Baumgartner (ADEC), to S. Taylor (BPX), acknowledging receipt of the May 15, 1997, BPX Amendment to the Endicott EOR/MGC PSD Permit Application, and explaining the requirement for an updated BACT analysis.
May 15, 1997	E-mail and letter, both with attachments, from A. Cooke (BPX), and S. Taylor (BPX), respectively, to J. Baumgartner (ADEC). E-mail and letter transmittals explain the amendment submittal for the Endicott Production Facility Enhanced Oil Recovery (EOR) and Main Gas Compressor (MGC) Projects' PSD permit application, and the Revised BACT analysis for the EOR project.
March 17, 1997	Letter with attachment from S. Taylor (BPX), to J. Baumgartner (ADEC), requesting an amendment for proposed heater modification projects and to correct typographical errors in equipment ratings and operational limitations in Endicott Production Facility Air Quality Control Permit to Operate No. 9573-AA007, as amended on January 17, 1997.
February 10, 1997	Letter from B. Thie (EPA), to S. Taylor (BPX), granting BPX an alternate fuel monitoring schedule for NATCH Konigsberg dual-fired turbine units NGT-#1-RIG 15, NGT-#2-RIG 15, and NGT-#3-RIG 15 at Doyen Rig 15, Endicott Production Facility.
January 21, 1997	Fax transmittal from A. Cooke (BPX), to A. Bohn (ADEC), requesting changes to amended Air Quality Control Permit to Operate No. 9573-AA029, issued on January 17, 1997.
January 17, 1997	Air Quality Control Permit to Operate No. 9573-AA029 with amendments for the Endicott Production Facility.
December 1996	AQC PTO No. 9573-AA029 for the Endicott Production Facility.
Sept. 25, 1995	Reference Exhibit C in amended Air Quality Control Permit to Operate No. 9573-AA025
May 11, 1993 - December 1996	AQC PTO No. 9573-AA029

March 28, 1983 - May 11, 1993 AQC PTO No. 9373-AA007

EXHIBIT D
PERMITTED SOURCE INVENTORY

The Permittee is authorized under this permit to operate the following stationary emission sources and any other stationary emission source with a rated capacity of less than one million British Thermal Units per hour (1.0 MMBtu/hr). The design rating, capacity, or throughput is set out in this exhibit only for the purpose of aiding in the identification of the source. The Permittee must notify the Department prior to installing any new equipment equal to or greater than 1.0 MMBtu/hr to determine the applicability of regulatory requirements.

Endicott Production Facility Source ID Number	**Equipment Description**	**Design Capacity or Rating**
Group I--Gas Turbines		
NGT-E3-1510A	Nuovo-Pignone Frame 5D	43,000 hp
NGT-E3-1510B	Nuovo-Pignone Frame 5D	43,000 hp
NGT-E3-1405	Nuovo-Pignone Frame 1	5,400 hp
NGT-E3-1802	Ruston Tornado	8,500 hp
NGT-E3-1907	Ruston Tornado	8,500 hp
NGT-E3-4501	Ruston Tornado	8,350 hp
NGT-E3-4502	Ruston Tornado	8,350 hp
NGT-E3-4503	Ruston Tornado	8,350 hp
NGT-E3-4504	Ruston Tornado	8,350 hp
GTRB-E3-9210	Nuovo-Pignone PGT-5	7,300 hp
Group II--Gas-fired Heaters		
NGH-E3-3002	Claudius Peters	97.9 MMBtu/hr
NGH-E3-3031	ENTECH	32.4 MMBtu/hr
NGH-E3-3201	WR Steel	6.5 MMBtu/hr
NGH-V-E3-1401-4	BS&B	7.0 MMBtu/hr
NGH-E3-1404	CE NATCO	27.0 MMBtu/hr
Group III--Diesel-Fired Equipment		
SDIH	O'Neil Heater	2.0 MMBtu/hr
DO-GED-E3-4505	Fairbanks Morse	4,168 hp
DO-GED-E3-4506	Fairbanks Morse	4,168 hp
DO-PED-EO-4001	Caterpillar D 3412	739 hp
DO-PED-EO-4002	Caterpillar D 3412	739 hp
DO-GEC-0036	Portable Emergency Generator	430 hp
DO-KED-0041	Portable Air Generator	300 hp
DO-IS-MUDPLT	Caterpillar D 3408	400 hp

EXHIBIT D (cont.)
PERMITTED SOURCE INVENTORY

Endicott Production Facility (cont.)		**Design Capacity**
Source ID Number	**Equipment Description**	**or Rating**
Group IV--Flares		
H-EO-1602 (HP)	GKN Birwelco LTD	500 MMscf/day (rated capacity)
H-EO-1601 (LP)	GKN Birwelco LTD	25 MMscf/day (rated capacity)
No Source Number	Portatest	7.8 MMscf/day (rated capacity)
No Source Number	Haliburton Portable	25 MMscf/day (rated capacity)

Doyon Rig 15		**Design Capacity**
Source ID number	**Equipment Description**	**or Rating**
Group I--Dual Fuel Fired Turbines		
NGT-#1-RIG 15	NATCO Kongsberg	2,080 hp
NGT-#2-RIG 15	NATCO Kongsberg	2,080 hp
NGT-#3-RIG 15	NATCO Kongsberg	2,080 hp
Group II--Dual Fuel Fired Boilers		
DFH-E3-RIG 15-#1	Apache	4.2 MMBtu/hr
DFH-E3-RIG 15-#2	Apache	4.2 MMBtu/hr
Group III--Diesel-Fired Equipment		
A	Caterpillar D-399	1,215 hp
B	Caterpillar D-379	577 hp
C	Caterpillar D-379	577 hp

EXHIBIT E
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

The Permittee shall operate each source in compliance with the applicable emission standards specified by 18 AAC 50.040-.060, by an applicable federal New Source Performance Standard (NSPS) or National Emission Standard for Hazardous Air Pollutants (NESHAP), by limits established as the result of a BACT or LAER determination, or the requested emission limits, standards, fuel specifications, and operating limits listed below, whichever is most stringent. Unless otherwise specified, annual potential emissions are based upon the maximum operating rate from Exhibit A, the use of fuels specified in the application documentation, and any operational or emission limit.

Exhaust conditions must be in accordance with the information submitted in documents listed in Exhibit E, unless otherwise specified in this Exhibit. The emission and operational limitations are valid only for the normal operating conditions described in the documents listed in Exhibit E. All turbine emission limits and estimates refer to full-load ISO conditions.

A. Operational Limitations

Unit ID/Description		Operational Limit
Endicott Production Facility		
Group II--Gas-Fired Heaters		
NGH-E3-3002	Claudius Peters	194 days/yr
Group III--Diesel-Fired Equipment		
DO-GED-E3-4505	Fairbanks Morse	504 hr/yr
DO-GED-E3-4506	Fairbanks Morse	504 hr/yr
Limit combined total daily operation of Source IDs DO-GED-E3-4505 and DO-GED-E3-4506 to 6 hours per day or less.		
DO-PED-EO-4001	Caterpillar D 3412	200 hr/yr
DO-PED-EO-4002	Caterpillar D 3412	200 hr/yr
Limit combined total daily operation of Source IDs DO-PED-E0-4001and DO-PED-E0-4002 to 6 hours per day or less.		
DO-GEC-0036	Portable Emergency Generator	12 hr/day up to 1080 hr/yr
DO-KED-0041	Portable Air Generator	12 hr/day up to 1440 hr/yr
Group IV--Flares		
H-EO-1602(HP)	GKN Birwelco LTD	
H-EO-1601(LP)	GKN Birwelco LTD	
	Total pilot and purge flow rate for GKN flares: 1.17 MMscf/day	
Portable Flares for Shutdown Scenario: Cumulative gas rate limited to 208.3 MMscf/year		

Haliburton Portable Flare: not to exceed 200 hr/yr
OR Portages Flare: not to exceed 504 hr/yr

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

A. Operational Limitations (cont.)

Unit ID/Description		Operational Limit
Doyon Rig 15		
Group I--Dual Fuel Fired Turbines		
NGT-#1-RIG 15	NATCO Kongsberg	
NGT-#2-RIG 15	NATCO Kongsberg	
NGT-#3-RIG 15	NATCO Kongsberg	
	cumulative hours of diesel fired operation	1,000 hr/yr
Group II--Dual Fuel Fired Boilers		
DFH-E3-Rig #15-#1	Apache Boiler	
DFH-E3-Rig #15-#2	Apache Boiler	
	cumulative hours of diesel fired operation	12,000 hr/yr
Group III--Diesel-Fired Equipment		
A	Caterpillar D-399	600 hr/yr
B	Caterpillar D-379	500 hr/yr
C	Caterpillar D-379	500 hr/yr

Or, Units A through C, (X/1080) + (Y/1400) not to exceed 1.0, where:

X = cumulative hours of operation for Unit A during a 12-month period
Y = cumulative hours of operation for Units A and B during the same 12-month period

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

B. Oxides of Nitrogen			**Potential Annual**
Unit ID/Description	**Emission Rate or Limit**		**Emissions (TPY)**
Endicott Production Facility			
Group I--Gas Turbines			
NGT-E3-1510A	Nuovo-Pignone Frame 5D	150 ppmvd @15% O_2[1]	1020.2
NGT-E3-1510B	Nuovo-Pignone Frame 5D	150 ppmvd @15% O_2[1]	1020.2
NGT-E3-1405	Nuovo-Pignone Frame 1	125 ppmvd @15% O_2[2]	113.3
NGT-E3-1802	Ruston Tornado	154 ppmvd @15% O_2[2]	174.6
NGT-E3-1907	Ruston Tornado	154 ppmvd @15% O_2[2]	174.6
NGT-E3-4501	Ruston Tornado	154 ppmvd @15% O_2[2]	171.6
NGT-E3-4502	Ruston Tornado	154 ppmvd @15% O_2[2]	171.6
NGT-E3-4503	Ruston Tornado	154 ppmvd @15% O_2[2]	171.6
NGT-E3-4504	Ruston Tornado	154 ppmvd @15% O_2[2]	171.6
GTRB-E3-9210	Nuovo-Pignone PGT-5	125 ppmvd @15% O_2[1]	179.0
Group II--Gas-Fired Heaters			
NGH-E3-3002	Claudius Peters	0.08 lb/ MMBtu[3] 18.2	
NGH-E3-3031	ENTECH	0.08 lb/ MMBtu[3]	11.4
NGH-E3-3201	WR Steel	0.16 lb/ MMBtu[4] 4.6	
NGH-V-E3-1401-4	BS&B	0.16 lb/ MMBtu[3]	4.9
NGH-E3-1404	CE NATCO	0.15 lb/ MMBtu[5]	17.7

[1]The emission limit is from the facility's PSD BACT determination (9773-AC011). The emission limit and associated annual emissions are enforceable for ISO conditions only.

[2]The emission limit is from the facility's PSD BACT determination (8436-AA009). The emission limit and associated annual emissions are enforceable for ISO conditions only.

[3]The emission limit is from the facility's PSD BACT determination (8436-AA009). The emission limit and associated annual emissions are enforceable.

[4]This unit's rated capacity was corrected to 6.5 MMBtu/hr and was not modified since original installation. Therefore, the emission limit is from the facility's PSD BACT determination (8436-AA009). The emission limit and associated annual emissions are enforceable.

[5]The NOx BACT emission limit for the CE Natco Heater was amended in 9773-AC006 to 0.15 lb/MMBtu.

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

B. Oxides of Nitrogen				**Potential Annual**
Unit ID/Description	**Emission Rate or Limit**			**Emissions (TPY)**
Endicott Production Facility (cont.)				
Group III--Diesel-Fired Equipment				
SDIH	O'Neil Heater	0.16 lb/MMBtu [1]		1.4
DO-GED-E3-4505	Fairbanks Morse	14.7 g/hp-hr [2]		34.0
DO-GED-E3-4506	Fairbanks Morse	14.7 g/hp-hr [2]		34.0
DO-PED-EO-4001	Caterpillar D 3412	14.7 g/hp-hr [2]		2.4
DO-PED-EO-4002	Caterpillar D 3412	14.7 g/hp-hr [2]		2.4
DO-GEC-0036	Portable Emergency Gen.	0.031 lb/hp-hr		7.2
DO-KED-0041	Portable Air Generator	0.031 lb/hp-hr		6.7
DO-IS-MUDPLT	Caterpillar D 3408	14.7 g/hp-hr [2]		6.8
Group IV--Flares				
H-EO-1602(HP)	GKN Birwelco LTD	.068 lb/MMBtu	AP-42	13.9
H-EO-1601(LP)	GKN Birwelco LTD	.068 lb/MMBtu	AP-42	0.2
	Portatest or Haliburton	.068 lb/MMBtu	AP-42	6.7
Endicott Production Facility Allowable NOx Subtotal				3,540.8

[1] The emission limit is from the facility's PSD BACT determination (8436-AA009). The emission limit and associated annual emissions are enforceable.

[2] The original PSD BACT emission limit (8436-AA009) was based on the draft NSPS subpart FF that was never promulgated. ADEC subsequently revised the limit to the AP-42 emission factor for diesel engines. The emission limit and associated annual emissions are enforceable.

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

B. Oxides of Nitrogen			**Potential Annual**
Unit ID/Description	**Emission Rate or Limit**		**Emissions (TPY)**
DOYON RIG 15			
Group I--Dual Fuel Fired Turbines[1]			
NGT-#1-RIG 15	NATCO Kongsberg	125(14.4/Y) ppm	63.8
NGT-#2-RIG 15	NATCO Kongsberg	125(14.4/Y) ppm	63.8
NGT-#3-RIG 15	NATCO Kongsberg	125(14.4/Y) ppm	63.8
Group II--Dual Fuel Fired Boilers[2]			
DFH-E3-RIG 15-#1	Apache (Natural Gas)	0.16 lb/MMBtu	0.9
DFH-E3-RIG 15-#2	Apache (Natural Gas)	0.16 lb/MMBtu	0.9
DFH-E3-RIG 15 #1&2	Diesel Fuel	20 lb/kgal	3.6
Group III--Diesel-Fired Equipment			
A Caterpillar D-399	0.031 lb/hp-hr (AP-42 1/95)		8.7
B Caterpillar D-379	0.031 lb/hp-hr (AP-42 1/95)		4.5
C Caterpillar D-379	0.031 lb/hp-hr (AP-42 1/95)		4.5
	Doyon Rig 15 Allowable NOx Subtotal		214.5
TOTAL ALLOWABLE FACILITY NOx EMISSION			**3,755.3 tpy**

[1] The emission limit is from the facility's PSD permit determination (8436-AA009). The emission limit and associated annual emissions are enforceable for ISO conditions.

[2] The natural gas emission limit is from the facility's PSD determination (8436-AA009). The emission limit and associated annual emissions are enforceable.

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

C. Sulfur Dioxide **Unit ID/Description**	**Emission Rate or Limit**		**Potential Annual Emissions (TPY)**
Fuel Burning Equipment only	May not exceed 500 ppm for more than any 3-consecutive hours		
Endicott Production Facility			
Group I--Gas Turbines			
NGT-E3-1510A	Nuovo-Pignone Frame 5D	250 ppm H_2S in fuel [1]	78.5
NGT-E3-1510B	Nuovo-Pignone Frame 5D	250 ppm H_2S in fuel [1]	78.5
NGT-E3-1405	Nuovo-Pignone Frame 1	250 ppm H_2S in fuel [2]	12.2
NGT-E3-1802	Ruston Tornado	250 ppm H_2S in fuel [2]	15.3
NGT-E3-1907	Ruston Tornado	250 ppm H_2S in fuel [2]	15.3
NGT-E3-4501	Ruston Tornado	250 ppm H_2S in fuel [2]	15.0
NGT-E3-4502	Ruston Tornado	250 ppm H_2S in fuel [2]	15.0
NGT-E3-4503	Ruston Tornado	250 ppm H_2S in fuel [2]	15.0
NGT-E3-4504	Ruston Tornado	250 ppm H_2S in fuel [2]	15.0
GTRB-E3-9210	Nuovo-Pignone PGT-5	250 ppm H_2S in fuel [1]	14.8
Group II--Gas-Fired Heaters			
NGH-E3-3002	Claudius Peters	250 ppm H_2S in fuel [2]	9.8
NGH-E3-3031	ENTEC	250 ppm H_2S in fuel [2]	6.3
NGH-E3-3201	WR Steel	250 ppm H_2S in fuel [2]	1.3
NGH-V-E3-1401-4	BS&B	250 ppm H_2S in fuel [2]	1.3
NGH-E3-1404	CE NATCO	250 ppm H_2S in fuel [2]	5.2
Group III--Diesel-Fired Equipment[3]			
SDIH	O'Neil Heater	0.15% by weight S fuel	1.3
DO-GED-E3-4505	Fairbanks Morse	0.15% by weight S fuel	1.1
DO-GED-E3-4506	Fairbanks Morse	0.15% by weight S fuel	1.1
DO-PED-EO-4001	Caterpillar D 3412	0.15% by weight S fuel	0.1
DO-PED-EO-4002	Caterpillar D 3412	0.15% by weight S fuel	0.1

[1]The hydrogen sulfide limit is from the facility's PSD ambient analysis and BACT determination (9773-AC011). The emission and associated emissions are enforceable.

[2]The hydrogen sulfide limit is from the facility's PSD ambient analysis (9773-AC011) and from previous permit and PSD determinations. The emission and associated emissions are enforceable.

[3]The fuel oil sulfur limit is from the facility's PSD ambient analysis (9773-AC011) and from previous permit actions (9573-AA029). The limit and associated emissions are enforceable.

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

C. Sulfur Dioxide (cont.)

Unit ID/Description	Emission Rate or Limit		Potential Annual Emissions (TPY)
Endicott Production Facility (cont.)			
Group III--Diesel-Fired Equipment (continued)[1]			
DO-GEC-0036	Portable Emergency Gen.	0.15% by weight S fuel	0.2
DO-KED-0041	Portable Air Generator	0.15% by weight S fuel	0.2
DO-IS-MUDPLT	Caterpillar D 3408	0.15% by weight S fuel	1.9
Group IV--Flares[2]			
H-EO-1602(HP)	GKN Birwelco LTD	250 ppm H_2S in fuel	9.2
H-EO-1601(LP)	GKN Birwelco LTD	250 ppm H_2S in fuel	0.2
	Portatest or Haliburton	250 ppm H_2S in fuel	4.3
Endicott Production Facility Allowable SO_2 Subtotal			318.2 tpy

[1]The fuel oil sulfur limit is from the facility's PSD ambient analysis (9773-AC011) and from previous permit actions (9573-AA029). The limit and associated emissions are enforceable.

[2]The hydrogen sulfide limit is from the facility's PSD ambient analysis (9773-AC011) and from previous permit and PSD determinations. The emission and associated emissions are enforceable.

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

C. Sulfur Dioxide (cont.)

Unit ID/Description		Emission Rate or Limit		Potential Annual Emissions (TPY)
DOYON RIG 15[1,2]				
Group I--Dual Fuel Fired Turbines				
NGT-#1-RIG 15		NATCO Kongsberg	250 ppm H_2S in fuel gas	4.1
NGT-#2-RIG 15		NATCO Kongsberg	250 ppm H_2S in fuel gas	4.1
NGT-#3-RIG 15		NATCO Kongsberg	250 ppm H_2S in fuel gas	4.1
Group I--All Sources			0.15% diesel fuel sulfur by weight	3.9
Group II--Dual Fuel Fired Boilers				
DFH-E3-RIG 15-#1		Apache (Natural Gas)	250 ppm H_2S in fuel	0.2
DFH-E3-RIG 15-#2		Apache (Natural Gas)	250 ppm H_2S in fuel	0.2
DFH-E3-R1G 15-#1 & #2		(Diesel fuel)	0.15% wt. Sulfur	6.6
Group III--Diesel-Fired Equipment				
A	Caterpillar D-399	0.15% by weight S fuel		0.6
B	Caterpillar D-379	0.15% by weight S fuel		0.3
C	Caterpillar D-379	0.15% by weight S fuel		0.3
		Doyon Rig 15 Allowable SO_2 Subtotal		28.2
TOTAL ALLOWABLE FACILITY SO_2 EMISSIONS				**346.4 tpy**

[1]The hydrogen sulfide limit is from the facility's PSD ambient analysis (9773-AC011) and from previous permit and PSD determination (9373-AA007). The emission and associated emissions are enforceable.

[2]The fuel oil sulfur limit is from the facility's PSD ambient analysis (9773-AC011) and from previous permit (9573-AA029). The limit and associated emissions are enforceable.

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

D. Carbon Monoxide			**Potential Annual**
Unit ID/Description	**Emission Rate or Limit**		**Emissions (TPY)**
Endicott Production Facility			
Group I--Gas Turbines[1]			
NGT-E3-1510A	Nuovo-Pignone Frame 5D	109 lb/MMscf	206.9
NGT-E3-1510B	Nuovo-Pignone Frame 5D	109 lb/MMscf	206.9
NGT-E3-1405	Nuovo-Pignone Frame 1	109 lb/MMscf	31.5
NGT-E3-1802	Ruston Tornado	109 lb/MMscf	39.7
NGT-E3-1907	Ruston Tornado	109 lb/MMscf	39.7
NGT-E3-4501	Ruston Tornado	109 lb/MMscf	39.0
NGT-E3-4502	Ruston Tornado	109 lb/MMscf	39.0
NGT-E3-4503	Ruston Tornado	109 lb/MMscf	39.0
NGT-E3-4504	Ruston Tornado	109 lb/MMscf	39.0
GTRB-E3-9210	Nuovo-Pignone PGT-5	109 lb/MMscf	39.0
Group II--Gas-Fired Heaters[2]			
NGH-E3-3002	Claudius Peters	200 ppmv	41.0
NGH-E3-3031	ENTEC	0.035 lb/MMBtu	5.0
NGH-E3-3201	WR Steel	0.035 lb/MMBtu	1.0
NGH-V-E3-1401-4	BS&B	0.035 lb/MMBtu	1.1
NGH-E3-1404	CE NATCO	0.035 lb/MMBtu	4.1
Group III--Diesel-Fired Equipment			
SDIH	O'Neil Heater	5 lb/kgal	0.3
DO-GED-E3-4505	Fairbanks Morse	0.00529 lb/hp-hr	5.6
DO-GED-E3-4506	Fairbanks Morse	0.00529 lb/hp-hr	5.6
DO-PED-EO-4001	Caterpillar D 3412	0.00529 lb/hp-hr	0.4
DO-PED-EO-4002	Caterpillar D 3412	0.00529 lb/hp-hr	0.4
DO-GEC-0036	Portable Emergency Gen.	0.00668 lb/hp-hr	1.6
DO-KED-0041	Portable Air Generator	0.00668 lb/hp-hr	1.4
DO-IS-MUDPLT	Caterpillar D 3408	0.00668 lb/hp-hr	11.7

[1]The emission limit is from the previous permit and PSD determinations, and only applies for 100% load and ISO conditions.

[2]The emission limits are from the facility's previous permit and PSD determinations.

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

D. Carbon Monoxide (cont.)

Unit ID/Description	Emission Rate or Limit			Potential Annual Emissions (TPY)
Endicott Production Facility (cont.)				
Group IV--Flares				
H-EO-1602(HP)	GKN Birwelco LTD	0.37 lb/MMBtu	AP-42	75.9
H-EO-1601(LP)	GKN Birwelco LTD	0.37 lb/MMBtu	AP-42	1.3
Portatest or Haliburton	0.37 lb/MMBtu	AP-42		36.6
Endicott Production Facility Allowable CO Subtotal:				912.7
DOYON RIG 15				
Group I--Dual Fuel Fired Turbines				
NGT-#1-3, RIG 15	NATCO Kongsberg	109 lb/MMscf - natural gas[1]		53.4
NGT #1-3	NATCO Kongsberg	0.000384 lb/hp-hr - Fuel Oil[2]		0.4
Group II--Dual Fuel Fired Boilers[3]				
DFH-E3-RIG 15-#1	Apache (Natural Gas)	0.034 lb/MMBtu		0.2
DFH-E3-RIG 15-#2	Apache (Natural Gas)	0.034 lb/-MMBtu		0.2
DFH-E3-R1615-#1 & 2	(Diesel fuel)	5 lb/kgal (AP-42 1/95)		1.0
Group III--Diesel-Fired Equipment				
A Caterpillar D-399		0.00528 lb/hp-hr		1.9
B Caterpillar D-379		0.00668 lb/hp-hr		1.0
C Caterpillar D-379		0.00668 lb/hp-hr		1.0
Doyon Rig 15 Allowable CO Subtotal				59.1
TOTAL ALLOWABLE FACILITY CARBON MONOXIDE EMISSIONS				**971.8 tpy**

[1]The natural gas emission limit is from the facility's previous permit and PSD determination and only applies for 100% load and ISO conditions.

[2]0.000384 lb/hp-hr *2080 hp*1000 hr/yr Operational limit = 0.4 tons per year on fuel oil.

[3]The gas-fired emission limit was revised from 0.018 lb/MMBtu in the facility's PSD permit determination (9373-AA007). The emission limit and associated annual emissions are enforceable.

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

E. Particulate Matter

Unit ID/Description	Emission Rate or Limit		Potential Annual Emissions (TPY)
All Equipment, except as noted below	May not exceed 20% opacity for more than 3 minutes in any one hour		
Fuel Burning Equipment only:	not to exceed 0.05 gr/dscf		
Endicott Production Facility			
Group I--Gas Turbines			
NGT-E3-1510A	Nuovo-Pignone Frame 5D	14.0 lb/MMscf AP-42 10% Opacity [1]	26.6
NGT-E3-1510B	Nuovo-Pignone Frame 5D	14.0 lb/MMscf AP-42 10% Opacity [1]	26.6
NGT-E3-1405	Nuovo-Pignone Frame 1	14.0 lb/MMscf AP-42 10% Opacity [2]	4.1
NGT-E3-1802	Ruston Tornado	14.0 lb/MMscf AP-42 10% Opacity [2]	5.1
NGT-E3-1907	Ruston Tornado	14.0 lb/MMscf AP-42 10% Opacity [2]	5.1
NGT-E3-4501	Ruston Tornado	14.0 lb/MMscf AP-42 10% Opacity [2]	5.0
NGT-E3-4502	Ruston Tornado	14.0 lb/MMscf AP-42 10% Opacity [2]	5.0
NGT-E3-4503	Ruston Tornado	14.0 lb/MMscf AP-42 10% Opacity [2]	5.0
NGT-E3-4504	Ruston Tornado	14.0 lb/MMscf AP-42 10% Opacity [2]	5.0
GTRB-E3-9210	Nuovo-Pignone PGT-5	14.0 lb/MMscf AP-42 10% Opacity [1]	5.0

[1]The 10% visible emission limit for specific units at the facility is a BACT limit from the facility's PSD Permit determination (9773-AC011) and is enforceable.

[2]The 10% visible emission limit for specific units at the facility is a BACT limit from the facility's PSD Permit determination (8436-AA009) and is enforceable.

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

E. Particulate Matter (cont.)

Unit ID/Description		Emission Rate or Limit	Potential Annual Emissions (TPY)
Group II--Gas-Fired Heaters			
NGH-E3-3002	Claudius Peters	5.0 lb/MMscf AP-42 10% Opacity	2.3
NGH-E3-3031	ENTEC	5.0 lb/MMscf AP-42 10% Opacity	0.7
NGH-E3-3201	WR Steel	5.0 lb/MMscf AP-42 10% Opacity	0.1
NGH-V-E3-1401-4	BS&B	5.0 lb/MMscf AP-42 10% Opacity	0.2
NGH-E3-1404	CE NATCO	5.0 lb/MMscf AP-42 10% Opacity	0.6
Group III--Diesel-Fired Equipment			
SDIH	O'Neil Heater	2 lb/kgal 10% Opacity	0.1
DO-GNED-E--4505	Fairbanks Morse	0.1 lb/MMBtu 10% Opacity	0.7
DO-GED-E3-4506	Fairbanks Morse	0.1 lb/MMBtu 10% Opacity	0.7
DO-PED-EO-4001	Caterpillar D 3412	0.1 lb/MMBtu 10% Opacity	< 0.1
DO-PED-EO-4002	Caterpillar D 3412	0.1 lb/MMBtu 10% Opacity	< 0.1
DO-GEC-0036	Portable Emergency Gen.	0.0022 lb/hp-hr	0.5
DO-KED-0041	Portable Air Generator	0.0022 lb/hp-hr	0.5
DO-IS-MUDPLT	Caterpillar D 3408	0.0022 lb/hp-hr 10% Opacity	3.9
Group IV--Flares			
H-EO-1602(HP)	GKN Birwelco LTD	40 ug/l	5.7
H-EO-1601(LP)	GKN Birwelco LTD	40 ug/l	0.1
	Portatest or Haliburton	40 ug/l	2.8
	Endicott Production Facility Allowable PM Subtotal		111.6

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

E. Particulate Matter (Continued)

Unit ID/Description		Emission Rate or Limit	Potential Annual Emissions (TPY)
DOYON RIG 15			
Group I--Dual Fuel Fired Turbines			
NGT-#1- 3 RIG 15	NATCO Kongsberg	14.0 lb/MMscf Natural Gas (AP-42)	6.9
NGT #1- 3 RIG 15	NATCO Kongsberg[1]	0.061 lb/MMBtu Fuel Oil	0.2
Group II--Dual Fuel Fired Boilers			
DFH-E3-RIG 15-#1	Apache (Natural Gas)	5.0 lb/MMBtu	< 0.1
DFH-E3-RIG 15-#2	Apache (Natural Gas)	5.0 lb/MMBtu	< 0.1
DFH-E3-RIG 15-#1&2	(Diesel fuel)	2 lb/kgal (AP-42 1/95)	0.4
Group III--Diesel-Fired Equipment			
A	Caterpillar D-399	0.0022 lb/hp-hr	0.2
B	Caterpillar D-379	0.0022 lb/hp-hr	0.3
C	Caterpillar D-379	0.0022 lb/hp-hr	0.3
	Doyon Rig 15 Allowable PM Subtotal		8.5
TOTAL ALLOWABLE PARTICULATE MATTER EMISSIONS			**120.1 tpy**

[1] 0.061 lb/MMBtu*1000hr/yr operational limit = 0.2 ton per year on fuel oil.

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

F. Volatile Organic Compounds

Unit ID/Description		Emission Rate or Limit	Potential Annual Emissions (TPY)
Endicott Production Facility			
Group I--Gas Turbines			
NGT-E3-1510A	Nuovo-Pignone Frame 5D	2.3 lb/MMscf AP-42	4.4
NGT-E3-1510B	Nuovo-Pignone Frame 5D	2.3 lb/MMscf AP-42	4.4
NGT-E3-1405	Nuovo-Pignone Frame 1	2.3 lb/MMscf AP-42	0.7
NGT-E3-180	Ruston Tornado	2.3 lb/MMscf AP-42	0.8
NGT-E3-190	Ruston Tornado	2.3 lb/MMscf AP-42	0.8
NGT-E3-450	Ruston Tornado	2.3 lb/MMscf AP-42	0.8
NGT-E3-450	Ruston Tornado	2.3 lb/MMscf AP-42	0.8
NGT-E3-450	Ruston Tornado	2.3 lb/MMscf AP-42	0.8
NGT-E3-450	Ruston Tornado	2.3 lb/MMscf AP-42	0.8
GTRB-E3-9210	Nuovo-Pignone PGT-5	2.3 lb/MMscf AP-42	0.8
Group II--Gas-Fired Heaters			
NGH-E3-3002	Claudius Peters	1.4 lb/MMscf AP-42	0.6
NGH-E3-3031	ENTEC	2.8 lb/MMscf AP-42	0.4
NGH-E3-3201	WR Steel	5.3 lb/MMscf AP-42	0.2
NGH-V-E3-1401-4	BS&B	5.3 lb/MMscf AP-42	0.2
NGH-E3-1404	CE NATCO	2.8 lb/MMscf AP-42	0.3
Group III--Diesel-Fired Equipment			
SDIH	O'Neil Heater	0.34 lb/kgal	0.1
DO-GED-E3-4505	Fairbanks Morse	.000728 lb/hp-hr	0.8
DO-GED-E3-4506	Fairbanks Morse	.000728 lb/hp-hr	0.8
DO-PED-EO-4001	Caterpillar D 3412	.000728 lb/hp-hr	0.1
DO-PED-EO-4002	Caterpillar D 3412	.000728 lb/hp-hr	0.1
DO-GED-0036	Portable Emergency Gen.	.00247 lb/hp-hr	0.6
DO-KED-0041	Portable Air Generator	.00247 lb/hp-hr	0.5
DO-IS-MUDPLT	Caterpillar D 3408	.00247 lb/hp-hr	4.3
Group IV--Flares			
H-EO-1602(HP)	GKN Birwelco LTD	0.063 lb/MMBtu	16.4
H-EO-1601(LP)	GKN Birwelco LTD	0.063 lb/MMBtu	0.2
	Portatest or Haliburton	0.063 lb/MMBtu	6.2

Endicott Production Facility Allowable VOC Subtotal 46.9

EXHIBIT E (cont.)
AIR CONTAMINANT EMISSION LIMITS
FUEL SPECIFICATION AND OPERATING LIMITS

F. Volatile Organic Compounds (cont.)

Unit ID/Description		Emission Rate or Limit	Potential Annual Emissions (TPY)
DOYON RIG 15			
Group I--Dual Fuel Fired Turbines			
NGT-#1- 3 RIG 15	NATCO Kongsberg (Gas)	2.3 lb/MMscf AP-42	1.2
NGT #1- 3 RIG 15	NATCO Kongsberg (Oil)[1]	0.017 lb/MMBtu	0.05
Group II--Dual Fuel Fired Heaters			
DFH-E3-RIG 15-#1	Apache (Natural Gas)	5.3 lb/MMBtu	< 0.1
DFH-E3-RIG 15-#2	Apache (Natural Gas)	5.3 lb/MMBtu	< 0.1
DFH-E3-RIG 15-#1&2	(Diesel fuel)	0.34 lb/kgal (AP-42 1/95)	0.1
Group III--Diesel-Fired Equipment			
A Caterpillar D-399		.000728 lb/hp-hr	0.3
B Caterpillar D-379		.00247 lb/hp-hr	0.4
C Caterpillar D-379		.00247 lb/hp-hr	0.4
	Doyon Rig 15 Allowable VOC Subtotal		2.6
TOTAL ALLOWABLE VOC EMISSIONS			**49.5 tpy**

[1] 0.017 lb/MMBtu*1000hr/yr fuel oil operation = 0.05 tons per year.

EXHIBIT F
EXCESS EMISSIONS NOTIFICATION FORM

Excess Emission Notification Form

Please Note: ALL entries MUST be printed

ALL time entries in military time

(DO NOT WRITE IN THIS SPACE - FOR ADEC USE ONLY)

REPORT RCVD: |__|__|__|__|__|__| |__|__|__|__|
mo day yr (military time)

PERMIT NUMBER: |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

NAME OF FACILITY

|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

COMPANY NAME

PHYSICAL LOCATION OF FACILITY: |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

SOURCE NO:|__|__|__|__|__| SOURCE DESCRIPTION: |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__| |__|__|__| |__|__|__|__|__|__|__|

(LAST,FIRST) NAME OF REPORTING INDIVIDUAL

REPORTER'S PHONE NUMBER

INCIDENT START: |__|__|__|__|__|__| |__|__|__|__|
mo day yr (military time)
DATE TIME

INCIDENT END: |__|__|__|__|__|__| |__|__|__|__|
mo day yr (military time)
DATE

NOTE: If excess emissions incident still in progress then briefly state steps taken to end incident

____

____

____

Predicted Incident End: |__|__|__|__|__|__| |__|__|__|__| Release Rate: _________________: ______________/hr
mo day yr (military time)

NATURE OF EXCESS EMISSION
(Check ALL that apply)

‘ **OPACITY:_______%** ‘ **BLACK SMOKE**

‘ **SO_X**	___________	‘ Tons	‘ Pounds	‘ Cu. Ft.	‘ Cu. M	‘ Unknown Amt.
‘ **Nox**	___________	‘ Tons	‘ Pounds	‘ Cu. Ft.	‘ Cu. M	‘ Unknown Amt.
‘ **Ammonia**	___________	‘ Tons	‘ Pounds	‘ Cu. Ft.	‘ Cu. M	‘ Unknown Amt.
‘ **Chlorine**	___________	‘ Tons	‘ Pounds	‘ Cu. Ft.	‘ Cu. M	‘ Unknown Amt.
‘ **Hydrogen Sulfide**	___________	‘ Tons	‘ Pounds	‘ Cu. Ft.	‘ Cu. M	‘ Unknown Amt.
‘ Volatile Organics	___________	‘ Tons	‘ Pounds	‘ Cu. Ft.	‘ Cu. M	‘ Unknown Amt.
‘ **Carbon Monoxide**	___________	‘ Tons	‘ Pounds	‘ Cu. Ft.	‘ Cu. M	‘ Unknown Amt.
‘ **Particulate**	___________	‘ Tons	‘ Pounds	‘ Cu. Ft.	‘ Cu. M	‘ Unknown Amt.
‘ **Other _____________;**	___________	‘ Tons	‘ Pounds	‘ Cu. Ft.	‘ Cu. M	‘ Unknown Amt.

ALL quantities calculated at standard conditions)

INJURIES: ‘ **Yes** ‘ **No** **NUMBER INJURED: |__|__|__|**

Nature of Injuries: |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

Notifications: (Please include organization, name and phone number of individual, date and time)

Excess Emission Notification Form

Please Note: ALL entries MUST be printed

Permit Number:|__|__|__|__|__|__|__|__|__|__|__|__| **INCIDENT START** |__|__|__|__|__|__| |__|__|__|__| **Page:** 2 **of:** __

2a. The excess emission event was due to: (Check ALL that apply)

- ‘ **STARTUP**
- ‘ **SHUTDOWN**
- ‘ **UPSET CONDITION**
- ‘ **SCHEDULED MAINTENANCE**
- ‘ **BYPASS OF CONTROL EQUIPMENT**
- ‘ **OTHER** _____

2b. Please identify the emission standard that was exceeded. Where applicable please include the specific regulation or permit condition stating paragraph and page number.

2c. Please provide a detailed description of the event and its cause. Include source number and description. (Use continuation sheets if necessary)

Excess Emission Notification Form

Please Note: ALL entries MUST be printed

Permit Number:|__|__|__|__|__|__|__|__|__|__|__|__| **INCIDENT START** |__|__|__|__|__|__| |__|__|__|__| **Page: 3 of: __**
mo day yr (military time)

2d. Please describe in detail ALL steps taken to minimize the excess emissions.

2e. Please describe in detail ALL corrective action taken to restore the system to normal operation:
(Use continuation sheets if necessary)

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Print Name: |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__| Signature: _____

Date: |__|__|__|__|__|__|
mo day yr